SEQUENCE LISTING

<110> BASF Aktiengesellschaft

<120> Sucrose-6-phosphate phosphatase as target for
      herbicides

<130> PF 53772

<150> DE 102 33 552.2
<151> 2002-07-23

<160> 19

<170> PatentIn Ver. 2.1

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gac cat aca atg gta gat cat cat gat gcc gag aac ctt tct ctg ctt   96
Asp His Thr Met Val Asp His His Asp Ala Glu Asn Leu Ser Leu Leu
                 20                  25                  30

aga ttt aat gct tta tgg gag gcg aat tat cgt gat aac tct ttg tta   144
Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Asp Asn Ser Leu Leu
             35                  40                  45

gtg ttc tca act ggg aga tca cct aca ctt tac aag gag ttg agg aaa   192
Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
         50                  55                  60

gaa aag ccc atg cta acc cca gat att act att atg tcg gtg gga act   240
Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
 65                  70                  75                  80

gaa ata aca tat ggt aac tct gtg gtg cct gat gat ggt tgg gaa gct   288
Glu Ile Thr Tyr Gly Asn Ser Val Val Pro Asp Asp Gly Trp Glu Ala
                 85                  90                  95

ttt cta aat aac aag tgg gac aga aag ata gta aca gag gag act agc   336
Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
                100                 105                 110
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aag ttt cct gaa ctc act cta cag tca gaa acg gag cag cga cca cac    384
Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His
        115                 120                 125

aag gtc agt ttc tat gtt cag aaa gac aaa gca caa gat ata atg aaa    432
Lys Val Ser Phe Tyr Val Gln Lys Asp Lys Ala Gln Asp Ile Met Lys
        130                 135                 140

act ctt tcc aag cgc ttc gaa gaa cgt ggg ctg gat gtc aaa ata att    480
Thr Leu Ser Lys Arg Phe Glu Glu Arg Gly Leu Asp Val Lys Ile Ile
145                 150                 155                 160

tac agt gga ggc atg gat cta gat ata tta cca caa ggt gct ggc aaa    528
Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys
                165                 170                 175

gga caa gca ctt gca tat ttg ctt aag aaa ttg aag agt gag gga aaa    576
Gly Gln Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys
                180                 185                 190

tta cca aac aac acc ctt gcc tgt ggt gac tct ggg aat gat gct gag    624
Leu Pro Asn Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp Ala Glu
                195                 200                 205

cta ttc agt atc cca gat gtg tat ggt gta atg gta gct aat gca cag    672
Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn Ala Gln
        210                 215                 220

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Glu Glu Leu Leu Gln Trp His Ala Ala Asn Ala Lys Asn Asn Pro Lys
225                 230                 235                 240

gta att cat gca aca gag agg tgt gct gcc ggt atc ata caa gct att    768
Val Ile His Ala Thr Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile
                245                 250                 255

ggt cat tcc aac cta ggt cca agt acc tcc cct aga gat gtt atg gat    816
Gly His Ser Asn Leu Gly Pro Ser Thr Ser Pro Arg Asp Val Met Asp
                260                 265                 270

ttg tca gac tgc aag atg gag aac ttt gtt ccc gcc tat gaa gtt gtc    864
Leu Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val
                275                 280                 285

aaa ttt tac cta ttt ttt gag aaa tgg agg cgt gga gaa att gag cat    912
Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu His
                290                 295                 300

tct gag cat tac ctg tca aac ctt aaa gca gtg tgt aga cca tct ggt    960
Ser Glu His Tyr Leu Ser Asn Leu Lys Ala Val Cys Arg Pro Ser Gly
305                 310                 315                 320
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PF53772

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act ttt gtc cac cca tct ggt gtt gag aaa tcc ctc cag gaa tgt gta   1008
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act tta ttc ggg aca tgt cat ggt gac aaa cag ggg aaa caa ttt cgt   1056
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att tgg gtc gat caa gtt tta cct gta cag gtt ggt tcg gac tca tgg   1104
Ile Trp Val Asp Gln Val Leu Pro Val Gln Val Gly Ser Asp Ser Trp
            355   360   365

tta gtg agt ttc aag aaa tgg gag ctc tct ggt gaa gac agg cga tgt   1152
Leu Val Ser Phe Lys Lys Trp Glu Leu Ser Gly Glu Asp Arg Arg Cys
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Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Lys Thr Val Ala Asp
385   390   395   400

gga ctc act tgg acc cac gta cat cag aca tgg ctg aat gga gct gca   1248
Gly Leu Thr Trp Thr His Val His Gln Thr Trp Leu Asn Gly Ala Ala
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gca agt gac tcc gcg tcc tgg ttc ttt tag   1278
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Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Asp Asn Ser Leu Leu
        35   40   45

Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
    50   55   60

Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
65   70   75   80

Glu Ile Thr Tyr Gly Asn Ser Val Val Pro Asp Asp Gly Trp Glu Ala
                85   90   95

Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
           100   105   110

Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His
           115   120   125

Lys Val Ser Phe Tyr Val Gln Lys Asp Lys Ala Gln Asp Ile Met Lys
           130   135   140

Thr Leu Ser Lys Arg Phe Glu Glu Arg Gly Leu Asp Val Lys Ile Ile
145   150   155   160

Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys
           165   170   175

Gly Gln Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys
           180   —   185   190

Leu Pro Asn Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp Ala Glu
           195   200   205

Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn Ala Gln
210   215   220

Glu Glu Leu Leu Gln Trp His Ala Ala Asn Ala Lys Asn Asn Pro Lys
225   230   235   240

Val Ile His Ala Thr Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile
              245   250   255

Gly His Ser Asn Leu Gly Pro Ser Thr Ser Pro Arg Asp Val Met Asp
           260   265   270

Leu Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val
           275   280   285

Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu His
           290   295   300

Ser Glu His Tyr Leu Ser Asn Leu Lys Ala Val Cys Arg Pro Ser Gly
305   310   315   320

Thr Phe Val His Pro Ser Gly Val Glu Lys Ser Leu Gln Glu Cys Val
           325   330   335

Thr Leu Phe Gly Thr Cys His Gly Asp Lys Gln Gly Lys Gln Phe Arg
           340   345   350

Ile Trp Val Asp Gln Val Leu Pro Val Gln Val Gly Ser Asp Ser Trp
           355   360   365

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Leu Val Ser Phe Lys Lys Trp Glu Leu Ser Gly Glu Asp Arg Arg Cys
    370             375             380
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Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Lys Thr Val Ala Asp
385             390             395             400
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Gly Leu Thr Trp Thr His Val His Gln Thr Trp Leu Asn Gly Ala Ala
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Ala Ser Asp Ser Ala Ser Trp Phe Phe
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gac cat acc atg gtt gat cat cat gat cct gag aac ctt tct ctg ctt    96
Asp His Thr Met Val Asp His His Asp Pro Glu Asn Leu Ser Leu Leu
             20              25              30

agg ttt aat gct tta tgg gag gcc aat tat cgt gaa aac tcc ttg tta   144
Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Glu Asn Ser Leu Leu
         35              40              45

gtg ttc tca act ggg aga tca cct acc ctt tac aag gag ttg aga aaa   192
Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
     50              55              60

gag aag ccc atg cta acc cca gat att acc att atg tct gtg ggg act   240
Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
 65              70              75              80

gaa ata act tat ggt aac tct atg gag cca gat gat ggt tgg gaa gca   288
Glu Ile Thr Tyr Gly Asn Ser Met Glu Pro Asp Asp Gly Trp Glu Ala
                 85              90              95

ttt tta aat gat aag tgg gat cgg aaa ata gtg aca gag gag aca agc   336
Phe Leu Asn Asp Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
            100             105             110

aaa ttt cct gaa ctc acc ctt cag tca gaa aca gag cag cga cca cac   384
Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His
        115             120             125
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aag gtc agt ttc tat gtt cag aaa gac aag gct caa gat ata acg gga    432
Lys Val Ser Phe Tyr Val Gln Lys Asp Lys Ala Gln Asp Ile Thr Gly
        130                 135                 140

act ctt tcc aag cgc ttg gaa gaa cgt ggg ttg gat gtc aaa ata att    480
Thr Leu Ser Lys Arg Leu Glu Glu Arg Gly Leu Asp Val Lys Ile Ile
145                 150                 155                 160

tat agc gga ggg atg gat ttg gac att ttg cca caa ggt gct ggc aaa    528
Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys
                    165                 170                 175

gga cga gca ctt gca tat ttg ctt aag aaa tta aag agt gag ggc aag    576
Gly Arg Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys
                180                 185                 190

tta cca aac aac acg ctt gcc tgt ggt gac tct gga aat gat gct gag    624
Leu Pro Asn Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp Ala Glu
                195                 200                 205

ctt ttc agt atc cca gat gtt tat ggt gtg atg gta gcg aat gca cag    672
Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn Ala Gln
210                 215                 220

gag gag tta tta caa tgg cgt gct gca aat gca aaa gat agt cca aaa    720
Glu Glu Leu Leu Gln Trp Arg Ala Ala Asn Ala Lys Asp Ser Pro Lys
225                 230                 235                 240

gta att cat gca aca gag aga tgt gcc gcg ggt ata ata caa gca att    768
Val Ile His Ala Thr Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile
                    245                 250                 255

ggg cat ttc aac ctg gga cca aat acc tct cct aga gat gtt aca gat    816
Gly His Phe Asn Leu Gly Pro Asn Thr Ser Pro Arg Asp Val Thr Asp
                260                 265                 270

atg tca gac tgc aag atg gag aat ttt gtt cct gct tat gaa gtc gtc    864
Met Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val
                275                 280                 285

aaa ttt tac ttg ttt ttc gag aaa tgg agg cgt gga gaa att gag aat    912
Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu Asn
        290                 295                 300

tct gac ctt cac ttg tca aac ctg aaa gca gtt tgt aga cca tcc ggt    960
Ser Asp Leu His Leu Ser Asn Leu Lys Ala Val Cys Arg Pro Ser Gly
305                 310                 315                 320

act ttt gtg cac cca tct gga gtt gag aaa tat ctt gag gac tgc ata   1008
Thr Phe Val His Pro Ser Gly Val Glu Lys Tyr Leu Glu Asp Cys Ile
            325                 330                 335
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aat aca ttg aga act tgt cac ggt gac aaa cag ggt aaa caa ttt cgt    1056
Asn Thr Leu Arg Thr Cys His Gly Asp Lys Gln Gly Lys Gln Phe Arg
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att tgg gtt gat cta gtg tta cct aca cag gtt ggt tca gat tca tgg    1104
Ile Trp Val Asp Leu Val Leu Pro Thr Gln Val Gly Ser Asp Ser Trp
            355             360             365


tta gtg agt ttc aag aaa tgg gag ctt tgt ggc gaa gag cga caa tgt    1152
Leu Val Ser Phe Lys Lys Trp Glu Leu Cys Gly Glu Glu Arg Gln Cys
            370             375             380


tgc ata act act gtc ttg tta agt tca aag aat gtg acg gtc gcg gat    1200
Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Val Thr Val Ala Asp
385             390             395             400


ggg ctc act tgg aca cat gtg cat cag act tgg ctg cag gga gca gca    1248
Gly Leu Thr Trp Thr His Val His Gln Thr Trp Leu Gln Gly Ala Ala
                405             410             415


gca agt gac tcc gcg tcc tgg ttc ttt taa                            1278
Ala Ser Asp Ser Ala Ser Trp Phe Phe
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Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Glu Asn Ser Leu Leu
         35              40              45


Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
     50              55              60


Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
 65              70              75              80


Glu Ile Thr Tyr Gly Asn Ser Met Glu Pro Asp Asp Gly Trp Glu Ala
                 85              90              95


Phe Leu Asn Asp Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
                100             105             110
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Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His
       115   120   125

Lys Val Ser Phe Tyr Val Gln Lys Asp Lys Ala Gln Asp Ile Thr Gly
       130   135   140

Thr Leu Ser Lys Arg Leu Glu Glu Arg Gly Leu Asp Val Lys Ile Ile
145   150   155   160

Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys
           165   170   175

Gly Arg Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys
          180   185   190

Leu Pro Asn Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp Ala Glu
       195   200   205

Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn Ala Gln
    210   215   220

Glu Glu Leu Leu Gln Trp Arg Ala Ala Asn Ala Lys Asp Ser Pro Lys
225   230   235   240

Val Ile His Ala Thr Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile
          245   250   255

Gly His Phe Asn Leu Gly Pro Asn Thr Ser Pro Arg Asp Val Thr Asp
          260   265   270

Met Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val
       275   280   285

Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu Asn
    290   295   300

Ser Asp Leu His Leu Ser Asn Leu Lys Ala Val Cys Arg Pro Ser Gly
305   310   315   320

Thr Phe Val His Pro Ser Gly Val Glu Lys Tyr Leu Glu Asp Cys Ile
          325   330   335

Asn Thr Leu Arg Thr Cys His Gly Asp Lys Gln Gly Lys Gln Phe Arg
       340   345   350

Ile Trp Val Asp Leu Val Leu Pro Thr Gln Val Gly Ser Asp Ser Trp
      355   360   365

Leu Val Ser Phe Lys Lys Trp Glu Leu Cys Gly Glu Glu Arg Gln Cys
    370   375   380

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Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Val Thr Val Ala Asp
385             390             395             400

Gly Leu Thr Trp Thr His Val His Gln Thr Trp Leu Gln Gly Ala Ala
                405             410             415

Ala Ser Asp Ser Ala Ser Trp Phe Phe
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          1               5                   10

gat ctt gac cat aca atg gta gat cat cac gat tcc gag aac ctt tct   159
Asp Leu Asp His Thr Met Val Asp His His Asp Ser Glu Asn Leu Ser
 15             20              25                  30

ctg ctt agg ttc aat gct tta tgg gaa gcc aat tat cgt gat aac tct   207
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                35              40                  45

ttg tta gtg ttc tct act ggg aga tca cct aca ctt tac aag gaa tta   255
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                50              55                  60

agg aaa gaa aag ccc atg cta acc cca gat att aca att atg tct gtg   303
Arg Lys Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val
            65              70                  75

gga act gaa ata aca tat ggt aac gct atg gtg cct gat gat ggt tgg   351
Gly Thr Glu Ile Thr Tyr Gly Asn Ala Met Val Pro Asp Asp Gly Trp
        80              85                  90

gaa aca ttt ctg aat aac aag tgg gat aga aag ata gta aca gag gag   399
Glu Thr Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu
95              100             105                 110

aca agc aag ttt cct gaa ctc agt ctg cag tca gaa aca gag cag cga   447
Thr Ser Lys Phe Pro Glu Leu Ser Leu Gln Ser Glu Thr Glu Gln Arg
            115             120                 125
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PF53772

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cca cac aag gtc agt ttc tat gtt cag aaa gag aaa gct caa gat ata      495
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atg aaa act ctt tcc aag cgc ttg gaa gaa cgt ggg ctg gat gtc aaa      543
Met Lys Thr Leu Ser Lys Arg Leu Glu Glu Arg Gly Leu Asp Val Lys
        145                 150                 155

ata att tac agt gga ggg atg gat cta gat ata tta cca cag ggt gct      591
Ile Ile Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala
        160                 165                 170

ggc aaa gga caa gca ctt gca tat ctg ctt aag aaa ctg aag agc gag      639
Gly Lys Gly Gln Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu
175                 180                 185                 190

gga aaa tta cca agc aac acc ctt gcc tgc ggc gac tcc ggg aat gac      687
Gly Lys Leu Pro Ser Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp
                195                 200                 205

gct gaa tta ttc agt atc cca gat gtg tat ggt gta atg gta gct aat      735
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            210                 215                 220

gcg cag aag gaa tta ctg cag tgg cat gct gca aat gca aaa aat aat      783
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        225                 230                 235

ccc aaa gta att cat gca tca gag agg tgt gcc gcc ggt atc ata caa      831
Pro Lys Val Ile His Ala Ser Glu Arg Cys Ala Ala Gly Ile Ile Gln
        240                 245                 250

gcc att ggt cat ttc aaa cta ggt cca agt acc tcc cca aga gac gtt      879
Ala Ile Gly His Phe Lys Leu Gly Pro Ser Thr Ser Pro Arg Asp Val
255                 260                 265                 270

acg gat ttg tca gat tgc aag atg gac aac ttt gtt cct gcc tat gaa      927
Thr Asp Leu Ser Asp Cys Lys Met Asp Asn Phe Val Pro Ala Tyr Glu
                275                 280                 285

gtt gtc aaa ttt tac ctg ttt ttt gag aaa tgg agg cgt gga gaa att      975
Val Val Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile
            290                 295                 300

gag cat tct gag cat tat ctg cca aac ctg aaa gca gtg tgt ata cca     1023
Glu His Ser Glu His Tyr Leu Pro Asn Leu Lys Ala Val Cys Ile Pro
        305                 310                 315

tct ggt act ttt gtt cac cca tct ggt gtt gag aaa tcc ctt cag gaa     1071
Ser Gly Thr Phe Val His Pro Ser Gly Val Glu Lys Ser Leu Gln Glu
        320                 325                 330
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335   340   345   350

tat cgt gtt tgg gtc gat caa gtt tta cct tca cag gtt ggt tca gac   1167
Tyr Arg Val Trp Val Asp Gln Val Leu Pro Ser Gln Val Gly Ser Asp
                355   360   365

tca tgg tta gtg agt ttc aag aag tgg gag ctc tct ggt gaa gac atg   1215
Ser Trp Leu Val Ser Phe Lys Lys Trp Glu Leu Ser Gly Glu Asp Met
            370   375   380

cga tgc tgc ata acc aca gtc cta tta agt tca aag aat aag act gtt   1263
Arg Cys Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Lys Thr Val
            385   390   395

gca gac ggg ctc act tgg act cac gta cat cag aca tgg ctg cac ggt   1311
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            400   405   410

gat gca gca agt gac tcc gca acc tgg ttc ttt tagattgtca tctcagtgta 1364
Asp Ala Ala Ser Asp Ser Ala Thr Trp Phe Phe
415   420   425

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                20   25   30

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            35   40   45

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Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
65   70   75   80

Glu Ile Thr Tyr Gly Asn Ala Met Val Pro Asp Asp Gly Trp Glu Thr
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Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
            100   105   110

Lys Phe Pro Glu Leu Ser Leu Gln Ser Glu Thr Glu Gln Arg Pro His
        115   120   125

Lys Val Ser Phe Tyr Val Gln Lys Glu Lys Ala Gln Asp Ile Met Lys
    130   135   140

Thr Leu Ser Lys Arg Leu Glu Glu Arg Gly Leu Asp Val Lys Ile Ile
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Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys
            165   170   175

Gly Gln Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys
        180   185   190

Leu Pro Ser Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp Ala Glu
        195   200   205

Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn Ala Gln
    210   215   220

Lys Glu Leu Leu Gln Trp His Ala Ala Asn Ala Lys Asn Asn Pro Lys
225   230   235   240

Val Ile His Ala Ser Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile
            245   250   255

Gly His Phe Lys Leu Gly Pro Ser Thr Ser Pro Arg Asp Val Thr Asp
            260   265   270

Leu Ser Asp Cys Lys Met Asp Asn Phe Val Pro Ala Tyr Glu Val Val
        275   280   285

Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu His
    290   295   300

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Thr Phe Val His Pro Ser Gly Val Glu Lys Ser Leu Gln Glu Cys Val
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Thr Ser Phe Gly Thr Cys His Ala Asp Lys Gln Gly Lys Gln Tyr Arg
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Val Trp Val Asp Gln Val Leu Pro Ser Gln Val Gly Ser Asp Ser Trp
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Leu Val Ser Phe Lys Lys Trp Glu Leu Ser Gly Glu Asp Met Arg Cys
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Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Lys Thr Val Ala Asp
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